

REMARKS

This Amendment is a fully responsive to the non-final Office Action dated February 3, 2009, issued in connection with the above-identified application. Claims 18-34 are pending in the present application. With this Amendment, independent claim 18 has been amended. No new matter has been introduced by the amendments made to the claims. Favorable reconsideration is respectfully requested.

In the Office Action, claims 18-29 and 32 have been rejected under 35 U.S.C. 102(b) as being anticipated by Tagami (U.S. Patent No. 6,269,168, hereafter “Tagami”). The Applicants have amended independent claim 18 to help further distinguish the features of the present invention from the cited prior art. As amended, independent claim 18 recites the following features:

“[a] speaker device comprising:

a housing having an opening portion;

a vibration system member vibrating to generate sound;

a support system member connected to said housing and for supporting said vibration system member in a manner which allows said vibration system member to vibrate;

a first magnetic circuit disposed inside said housing and having a first magnet provided on a surface thereof facing the opening portion, and a first yoke provided lateral to the first magnet; and

a second magnetic circuit having a second magnet disposed facing the first magnet of said first magnetic circuit via a first magnetic gap, and a second yoke provided lateral to the second magnet,

wherein a second magnetic gap is formed in at least one of an interval between a side surface of the first magnet and the first yoke in said first magnetic circuit and an interval between a side surface of the second magnet and the second yoke in said second magnetic circuit,

said vibration system member includes:

a first voice coil;

a first voice coil bobbin provided to dispose the first voice coil in the

second magnetic gap; and

a magnetic member made of a magnetic material other than a magnet, and connected directly or indirectly to the first voice coil bobbin so that the magnetic member is disposed in the first magnetic gap between the first magnet of said first magnetic circuit and the second magnet of said second magnetic circuit, wherein

when said vibration system member is displaced from a balanced position, the magnetic member receives a repelling force in a direction which causes the magnetic member to travel away from the balance position by the magnetic field formed by said first and second magnetic circuits.” (Emphasis added).

The features emphasized above in independent claim 18 are fully supported by the Applicants’ disclosure (see ¶[0093] and ¶[0094]). Additionally, the features emphasized above in independent claim 18 are not believed to be disclosed or suggested by the cited prior art.

The present invention (as recited in independent claim 18) is distinguishable over the cited prior art in that when the vibration system member (the diaphragm 9a) is displaced from a balanced position, the magnetic member made of a magnetic material other than a magnet (the non-magnet member 91a) receives a repelling force in a direction which causes the magnetic member (the non-magnet member 91a) to travel away from the balanced position by the magnetic field formed by the first and second magnetic circuits.

At least a portion of the diaphragm 9a, which is composed of the magnetic member made of a magnetic material other than a magnet (the non-magnet member 91a), vibrates while the magnetic member (the non-magnet member 91a) receives a repelling force in a direction which causes the non-magnet member 91a to travel away from the balanced position by the magnetic field formed by the first and second magnetic circuits. Therefore, the speaker device of the present invention (as recited independent claim 18) has an advantage that it can reduce the acoustic stiffness so that the minimum resonant frequency of the speaker unit 2a is reduced.

In the Office Action, the Examiner relies on Tagami for disclosing or suggesting all the features of the speaker device of claim 18. However, the Applicants assert that Tagami fails to disclose or suggest the features of independent claim 18, as amended.

Tagami discloses or suggests a conventional speaker device that operates by merely

combining a speaker reproducing sound in a high frequency range and a speaker reproducing sound in a mid to low frequency range. Tagami does not disclose or suggest that the vibrating plate 120, which corresponds to the diaphragm 9a in the application, includes a magnetic member made of a magnetic material other than a magnet.

Additionally, the magnetic circuit 106 disclosed in Tagami, which corresponds to the first magnetic circuit 5a, is covered by a shield cover 119 for prohibiting the magnetic flux from leaking from the magnetic circuit 106 (see e.g., Tagami, col. 1, lines 61-64). Therefore, the magnetic field is not formed from the magnetic circuit 106 and the magnetic circuit 108, which in the Examiner relies on as corresponding to the claimed second magnetic circuit 6a. Additionally, the vibrating plate 120 is not influenced by the magnetic circuit 106.

Accordingly, even if the vibrating plate 120, in Tagami, includes the magnetic member made of a magnetic material other than a magnet, the vibrating plate 120 can not receive a repelling force because a magnetic field is not formed by the magnetic circuits 106 and 108.

Based on the above discussion, independent claim 18 is not anticipated or rendered obvious by Tagami. Likewise, claims 19-29 and 32 are not anticipated or rendered obvious by Tagami at least by virtue of their dependencies (directly or indirectly) from independent claim 18.

In the Office Action, claim 30 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Tagami in view of Dijkstra et al. (U.S. Patent No. 4,607,382, hereafter “Dijkstra”); claim 31 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Tagami in view of Dijkstra, and further in view of Proni (U.S. Patent No. 6,501,844); and claims 33 and 34 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Tagami.

Claims 30, 31, 33 and 34 depend from independent claim 18. As noted above, Tagami fails to disclose or suggest all the features recited in independent claim 18 (as amended). Additionally, Dijkstra and Proni fail to overcome the deficiencies noted above in Tagami. Accordingly, no combination of Tagami, Dijkstra and Proni would result in, or otherwise render obvious, claims 30, 31, 33 and 34 at least by virtue of their dependencies (directly or indirectly) from independent claim 18.

In light of the above, the Applicants respectfully submit that all the pending claims are

patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the Office Action, and pass this application to issue. The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

Toshiyuki MATSUMURA et al.

/Mark D. Pratt/

By: 2009.05.04 16:21:23 -04'00'

Mark D. Pratt

Registration No. 45,794

Attorney for Applicants

MDP/ats
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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